A-7

Department of Toxic Substances Control

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February 14, 2005

Ms. Angela Reynolds
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NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LONG BEACH SPORTS PARK PROJECT (SCH #1999091108)

Dear Ms. Reynolds:

The Department of Toxic Substances Control (DTSC) has received your Notice of Completion (NOC) of a draft Environmental Impact Report (EIR) for the above-mentioned Project. 1

Based on the review of the document, DTSC's comments are as follows:

1. DTSC's comments dated February 23, 2004, regarding the Notice of Preparation have not been answered properly in the draft EIR. If an item mentioned in the aforementioned letter is not applicable to the project site, it should be stated and explained in the EIR. 2

2. On page 4.13-6, the draft EIR states that Dames and Moore conducted site investigations of portions of the site in 1988 when the property was being considered as part of the future site of the City of Long Beach Auto Mall. State whether the investigations were overseen by any regulatory agency. The draft EIR further states that Dames and Moore submitted a limited number of soil samples collected in 1988 for analysis of halogenated volatile organics (via USEPA Method 8010) and volatile aromatics (via USEPA Method 8020). These USEPA analytical methods are outdated and have been replaced. The currently approved analytical method for volatile organic compounds is USEPA 8260B with sampling preparation method USEPA Method 5035. Since the Health Risk Assessment (HRA) was prepared based on data from outdated analytical methods, its accuracy is questionable. Therefore, DTSC recommends that new sampling be conducted at the site for VOCs. Depending on the soil type, soil gas sampling is usually more accurate than soil matrix sampling. Potential for vapor intrusion to indoor air should also be calculated. 3

3. On page 4.13-7, the draft EIR states that Environmental Science and Engineering, Inc. (ESE) conducted a site investigation of a 7.9-acre portion of the site for a proposed Retail Center for the City of Long Beach Redevelopment Agency. The report further states that 39 soil samples were submitted for analysis of VOCs by Method 8240 and 8 soil samples were submitted for analysis of VOCs by Method 8020. Those methods are outdated, so the above comment is also applicable to this section and additional sampling is needed. 4

4. On page 4.13-8, the draft EIR states that ESE conducted a site investigation of a 1.963-acre portion of the site for the City Redevelopment Agency. It further states that benzene, toluene, ethylbenzene and total xylenes (BTEX) were analyzed via Method 8020. As indicated in the above comments, additional sampling is needed at the site. 5

5. On page 4.13-9, the draft EIR states that ESE conducted a site investigation of a portion of the site (9-acre) for a proposed Retail Center for the City Redevelopment Agency in 1994. As discussed above, USEPA Method 8240 was used for analyzing VOCs and detected BTEX. Further sampling is needed for a complete characterization of the site and accuracy of the HRA. 6

6. On the same page, another site investigation is also reported in 1994 for a 30-acre portion of the site for the proposed Retail Center. The narrative does not identify the method used to analyze VOCs, which were detected. 7

7. The draft EIR states that the City of Long Beach submitted a request to have the HRA reviewed by the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA), on June 30, 2004. However, the draft EIR does not state whether OEHHA reviewed and approved the HRA. 8

8. The draft EIR states that Los Angeles Regional Water Quality Control Board (RWQCB) is the Responsible Agency that has jurisdiction to oversee hazardous substance cleanup. Please provide documentation that RWQCB has agreed to oversee this project. 9

9. On Page 4.13-22, the draft EIR states, "The results of the HRA indicate that the estimated summation of risks of the carcinogenic metals, beryllium, cadmium and nickel detected at 1 foot bgs, via the ingestion, dermal contact and inhalation exposure routes, is 2.73×10^{-6}. This estimated risk value is within USEPA's 'safe and protective of public health' risk range of 1×10^{-4} to 1 x 10-^{6}." Please clarify whether this represents the summation of health risks from all carcinogens. Also, provide the total hazard index of non-carcinogens contaminants at the site. Since the site has not been adequately characterized, any HRA conclusions 10

are suspect. A new site investigation should be conducted and overseen by the appropriate regulatory agency. This should be followed by a new HRA which should be submitted to a regulatory agency with expertise in risk assessments (DTSC or OEHHA) for review. DTSC would be able to oversee this work under a voluntary cleanup agreement. 10

10. DTSC recommends that no construction take place until a thorough site investigation and HRA have been performed, with oversight and approval by an appropriate regulatory agency. 11

11. Institutional controls such as deed restrictions will need to be placed on the property prior to its development if soil contamination above levels suitable for unrestricted use is left in place at the site. Remediation and/or institutional controls may also be needed if groundwater is contaminated. 12

If you have any questions regarding this letter, please contact me at (714) 484-5461.

Sincerely,

Greg Holmes
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CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

A-7-1
The comment is introductory and does not contain any substantive statements or questions about the Draft EIR. Therefore, no further response is necessary.

A-7-2
The author's statement that Notice of Preparation (NOP) comments were not addressed in the EIR is incorrect. Section 4.13 within the Draft EIR addresses NOP comments received by the members of the public, DTSC, and the Los Angeles County Department of Public Works in a summary fashion on pages 4.13-32 through 4.13-37. The request of the author to specifically address and comment on each aspect of the DTSC NOP comment letter is not required by CEQA. The analyses provided in the Draft EIR include thorough analysis of existing conditions and potential health risks as outlined in the paragraph below. It is the opinion of the Local Agency that the analysis and data relied upon for the analysis are complete and accurate and meet all requirements of CEQA and the State CEQA Guidelines for an EIR.

Section 4.13 of the Draft EIR identifies: (1) the current and historic uses of the project site, (2) the lead regulatory agency, the Los Angeles Regional Water Quality Control Board (LARWQCB), (3) the results of a groundwater investigation conducted under the oversight of the lead regulatory agency (LARWQCB), (4) health protective measures to be followed during any site construction and demolition activities, (5) the determination that the County of Los Angeles Department of Health Services (DHS) found the site is not a landfill, that Title 27 does not apply, and that the site is not a border zone, and (6) a Soil Management Plan to be prepared and approved by the lead regulatory agency that would determine the handling and disposition of any potentially contaminated soils discovered during site grading activities.

Additionally, a Draft HRA was prepared in August 2003 with the data collected by following the criteria within the EPA-approved Sampling and Analysis Plan in 2002 and 2003. This Draft HRA was submitted to LARWQCB, which submitted the document to the Office of Environmental Health Hazard Assessment (OEHHA) for review.

Moreover, the mitigation measures within Section 4.13, pages 4.13-37 through 4.13-40 of the Draft EIR, provide specific guidance for pre-demolition surveys, a health and safety plan, the aforementioned Soil Management Plan, on-site monitoring during site grading activities, methane testing, and active oil well safety measures.

A-7-3
Dames & Moore submitted a limited number of the soil samples collected in 1988 for analyses of fuel hydrocarbons (via USEPA method 8015 modified [8015m]), total petroleum hydrocarbone (TPH) (via USEPA method 418.1), halogenated volatile organics (via USEPA method 8010), volatile aromatics (via USEPA method 8020), SVOCs, primarily polynuclear aromatics (PNAs) (via USEPA method 8270), CAM metals, and organochlorine pesticides (via USEPA method 8080). Dames &

Moore also conducted field screening with an organic vapor analyzer (OVA), soil vapor testing for methane, and collected two groundwater samples from perched groundwater encountered during their investigations in 1988. Environmental Science and Engineering, Inc. (ESE) submitted a limited number of soil samples collected for analysis of TPH, volatile organic compound (VOC), PNAs, and Title 22 metals. ESE focused their investigation activities on soil vapor using both an OVA and/or HNU and laboratory analyses. The soil vapor analyses primarily focused on the presence or absence of a range of hydrocarbons between C5 and C7.

The results of the investigations conducted by Dames & Moore and ESE (as reported by Dames & Moore and ESE) showed that petroleum hydrocarbons extend to depths of 10–15 feet bgs in areas of active oil production and storage. PNAs were detected in areas associated with the oil field activities, and the soil vapor results indicate the presence of C1–C5 carbon chains and methane.

The investigations conducted by both Dames & Moore and ESE were limited in scope and collection of soil samples. Both firms relied on field instrumentation for the detection of volatiles that their field personnel identified as methane, C1–C5 carbon chains, and PNAs. Additionally, the analytical methodology used by both firms would not meet the data quality objectives of a risk assessment. It is not known whether the investigations conducted by Dames & Moore in 1988 were performed under the direction or oversight of any regulatory agency. Therefore, the analytical results from the investigations conducted by other consultants in 1988, 1993, 1994, and 1999 (including Dames & Moore and ESE) were not assessed in the Draft HRA or the Draft EIR.

Only the data collected during the 2002 and 2003 field investigations, performed by following the guidance within the EPA-approved Sampling and Analysis Plan, were used in the Draft HRA prepared in August 2003. The data collected during the previous site investigations in 1988, 1993, 1994, and 1999 were not collected for a human health risk assessment and therefore were analyzed using less rigorous analytical methods than were used during the sampling events in 2002 and 2003. Additionally, the sample collection methodology for VOCs has changed. The data collected for the Draft HRA (August 2003) were obtained by using the current EPA and DTSC-approved practice sampling methodology for VOCs.

The Draft HRA, *Long Beach Sports Park, Long Beach, California*, Volumes 1 through 6, was prepared in August 2003 by Mearns Consulting Corporation and was incorporated by reference into the Draft EIR and made available for public review. Section 4.13, pages 4.13-1 and 4.13-15 of the Draft EIR states that 169 soil borings were placed on site in 2002 and 2003. Over 330 soil samples were collected from these soil borings. Figure 4.13.1 in the Draft EIR (Figure 3 in the Draft HRA) depicts the boring locations of the soil sampling that was conducted specifically to characterize the site using a biased, deterministic sampling strategy based on the results of the previous site investigations conducted in 1988, 1994, 1995, and 1999; and information regarding the historic uses of the site; and the operations of the tenants at the time of the investigations conducted in 2002 and 2003. Figure 4.13.1 shows aboveground storage tanks, buildings, and oil wells in addition to the locations of the 169 borings placed to 10 feet bgs, the 5 borings placed to 25 feet bgs, and the 20 borings placed to depths varying from 20–90 feet bgs. Specifically, 47 borings were placed at the former Petrolane/Lomita facility, and at least 94 soil samples were collected and submitted for all analyses. The number of samples collected from each depth and submitted for analyses were as follows:

- 175 soil samples were collected from 1 foot bgs and submitted for analysis of metals
- 158 soil samples were collected from 5 feet bgs and submitted for analysis of metals
- 118 soil samples were collected from 10 feet bgs and deeper and submitted for analysis of arsenic
- 17 soil samples were collected from 10 feet bgs and deeper and submitted for analysis of other metals
- 174 soil samples were collected from 1 foot bgs and submitted for analysis of TPH-g, TPH-d, and speciated carbon chains
- 158 soil samples were collected from 5 feet bgs and submitted for analysis of TPH-g and TPH-d
- 159 soil samples were collected from 5 feet bgs and submitted for analysis of speciated carbon chains
- 118 soil samples were collected from 10 feet bgs and deeper and submitted for analysis of speciated carbon chains
- 24 soil samples were collected from 10 feet bgs and deeper and submitted for analysis of TPH-g
- 20 soil samples were collected from 10 feet bgs and deeper and submitted for analysis of TPH-d
- 174 soil samples were collected from 1 foot bgs and submitted for analysis of VOCs and SVOCs
- 158 soil samples were collected from 5 feet bgs and submitted for analysis of VOCs and SVOCs

These data were collected using the most recent sample collection methodology and were submitted for analysis using the most rigorous analytical methodology available. The analytical results from these soil samples only were assessed in the Draft HRA.

The field activities conducted on site in 2002 and 2003 were conducted under the supervision of a registered geologist who prepared soil boring logs that were included in the Draft HRA. A geotechnical consulting firm, AMEC, was retained by the City to prepare the *Geotechnical Evaluation in Support of Conceptual Design and EIR, Long Beach Sports Park, south and west of Spring Street and Orange Avenue, Long Beach, California* (AMEC 2004) referenced in the Draft HRA.

The purpose of the additional soil sampling as stated in Section 4.13 of the Draft EIR, page 4.13-15, was to characterize surficial site soils and those areas where a topographic change in elevation was anticipated based on the site plan for the proposed Sports Park and to provide data for use in the site-wide Draft HRA. Section 4.13, page 4.13-15 of the Draft EIR, further states that all field work was performed according to the EPA-approved Sampling and Analysis Plan.

Additionally, Section 4.13 of the Draft EIR states that the locations of the soil samples were determined using a biased, deterministic sampling strategy and provides the sampling methodology for analysis of total petroleum hydrocarbons (TPH)-gasoline range, TPH-diesel range, and speciated hydrocarbons (EPA 8015m), volatile organic compounds (EPA 8260B; collected via EPA method 5035), semivolatile organic compounds (EPA 8270C) and total threshold limit concentration metals (EPA 6010B), mercury (EPA 7471), cyanide (EPA 9010) and hexavalent chromium (EPA 7196A).

Section 4.13, page 4.13-16 of the Draft EIR states that the data collected in 2002 and 2003 indicated that only trace concentrations of volatile organic compounds (VOCs) and semivolatile organic compounds were detected in 27 out of the 333 soil samples collected from one foot bgs and five feet bgs. It is unlikely that soil gas sampling for VOCs would provide different results. Moreover, given the anticipated topographic changes in elevation required for the site to become a Sports Park, soil gas sampling for VOCs would not provide meaningful results relative to the future end user of the site.

Lastly, the future end use of the site is as a pay-for-play Sports Park, with the primary users expected to be adults. Although the children's museum was considered for incorporation into the project in 2003 when the HRA was prepared, it is no longer part of the proposed project. The proposed Sports Park will have minimal structures on site. A methane assessment will be conducted immediately after 30 days have elapsed since the site was rough graded to comply with the Los Angeles City Department of Building and Safety (LADBS) Code (Mitigation Measure 4.13.6). Should concentrations of methane be detected at levels that exceed LADBS threshold values, additional mitigation measures will be implemented, as warranted. Such a system would prevent any vapors from entering the minimal number of structures planned for the site.

A-7-4

See Response to Comment A-7-3. ESE submitted a limited number of soil samples collected for analysis of TPH, VOCs, PNAs, and Title 22 metals. ESE focused their investigation activities on soil vapor, using both an OVA and/or HNU and laboratory analyses. The soil vapor analyses primarily focused on the presence or absence of a range of hydrocarbons between C5 and C7. The analytical methodology used by ESE would not meet the data quality objectives of a risk assessment. Therefore, the analytical results from the investigations performed by ESE were not assessed in the Draft HRA or the Draft EIR.

The full analytical suite inclusive of VOCs, SVOCs, TTLC metals, Cr+6, TPH-g, TPH-d, and speciated carbon chains was performed on over 300 soil samples. Benzene, toluene, ethylbenzene, and zylene (BTEX), as a VOC, was analyzed.

Only 27 VOCs and SVOCs were detected in 332 samples submitted for analysis of these chemicals. All of these compounds were retained as chemicals of potential concern and assessed further in the Draft HRA. It should be noted that 73 out of 332 soil samples (22 percent) submitted for analysis of SVOCs had elevated reporting limits due to elevated concentrations of TPH within the same soil sample.

Several soil samples contained concentrations of heavy-end hydrocarbons such that the samples required dilution prior to analysis via USEPA Method 8270 for SVOCs. The laboratory stated that the gas chromatograph/mass spectrometer used for this analysis is extremely sensitive and useful for detecting minute quantities of SVOCs, but when any single compound is present at high levels or if petroleum hydrocarbons are present at high levels, then the sample must be diluted, elevating the reporting limit for all compounds. If the lab were to attempt to analyze the samples without the appropriate dilution, the instrument would become contaminated, requiring extensive and time-consuming maintenance, or, in some cases, damage to the mass selective detector may occur resulting in time-consuming and costly replacement of parts. A complete list of those SVOC samples for which the reporting limit was diluted due to high levels of hydrocarbons is included in Appendix C of the Draft HRA.

A-7-5
See Response to Comments A-7-3 and A-7-4.

A-7-6
See Response to Comments A-7-3 and A-7-4.

A-7-7
See Response to Comment A-7-3. OEHHA is in receipt of and in the process of reviewing the Draft HRA at the direction of LARWQCB.

A-7-8
OEHHA is in receipt of and in the process of reviewing the Draft HRA at the direction of LA RWQCB, in accordance with an agreement between LARWQCB, OEHHA, and the City. See Response to Comment A-7-9.

A-7-9
As explained in Section 4.13, page 4.13-17 of the Draft EIR, the Los Angeles Regional Water Quality Control Board (LARWQCB) has been the lead agency for this site since at least 1993. This site was assigned Spills, Leaks, Investigations and Cleanups (SLIC) No. 716 by the LARWQCB. The City entered into an Oversight Cost Reimbursement Account with the LARWQCB on or around 1993. Pursuant to the "Memorandum of Agreement [MOA] between the Department of Toxic Substances Control and The State Water Resources Control Board and The Regional Water Quality Control Boards and the California Environmental Protection Agency for the Oversight of Investigation and Cleanup Activities at Brownfields Sites" (March 1, 2005), the MOA does not apply to "existing sites: Existing site are those at which DTSC or a Regional Board is currently serving as lead or oversight agency." Since LARWQCB has been the Lead Agency for the Sports Park project site since 1993, the selection procedures outlined in the MOA do not apply to the site and LARWQCB is the appropriate Responsible Agency under CEQA charged with reviewing and approving the HRA. The Draft EIR further states on page 4.13-17 that there is an existing Memorandum of Understanding between LARWQCB and OEHHA that facilitates review of HRAs by OEHHA when LARWQCB is the oversight agency for an HRA. The Draft HRA was submitted to LARWQCB, who requested review by OEHHA.

The LARWQCB clean-up standards for petroleum hydrocarbons in a residential development were used as a screening mechanism to which the 95UCL of the detected concentrations of TPH-g, TPH-d, and speciated carbon chains were compared to determine whether these compounds would be retained as chemicals of concern and assessed within the risk assessment. The 95UCL was calculated using the equation presented in Epidemiology Biostatistics and Preventive Medicine (Jekel et al. 1996). The document that contains the LARWQCB clean-up goals is included as Appendix B in the Draft HRA, and the MADEP guidance document is also included as Appendix D of the Draft HRA.

Since the LARWQCB is the Responsible Agency with jurisdiction to oversee hazardous substance clean-up, the comparison of detected concentrations of petroleum hydrocarbons in on-site soils to the LARWQCB clean-up guidance for petroleum hydrocarbons for screening purposes is adequate and applicable. The LARWQCB has established these clean-up goals for comparable sites (relative to site contaminants) that have been developed as residential neighborhoods.

The Draft HRA was performed to residential standards, which are more health protective than worker standards. Therefore, the resultant risk and hazard estimates are applicable to all future users of the proposed Sports Park, the future employees of the proposed Sports Park, and the trespassers on the site in its current condition.

A-7-10
Section 4.13, page 4.13-16 of the Draft EIR provides the results of the Draft HRA for those chemicals retained as chemicals of concern (COCs) at depths of 1 foot bgs, 5 feet bgs, and 10 feet bgs and deeper. As stated in Section 4.13, the Draft HRA assessed COCs at the surface (1 foot bgs), at depth (5 feet bgs), and at the anticipated depths at which construction workers involved in the elevation changes might be exposed (10–90 feet bgs).

Section 4.13, page 4.13-16 of the Draft EIR states the hazard index (HI) for those COCs at 1 foot bgs is 0.654, DTSC's LeadSpread 7.0 Model indicates the exposure to lead at 1 foot bgs is less than the threshold of 10 micrograms per deciliter of blood for children and adults, and the summation of risk for those carcinogens detected at 1 foot bgs is 2.73×10^{-6}.

Furthermore, Section 4.13, page 4.13-16 of the Draft EIR states the HI for those COCs at 5 feet bgs is 0.011, DTSC's LeadSpread 7.0 Model indicates the exposure to lead at 5 feet bgs is less than the threshold of 10 micrograms per deciliter of blood for children and adults, and the summation of risk for those carcinogens detected at 5 feet bgs is 2.17×10^{-7}.

Lastly, Section 4.13, page 4.13-16 of the Draft EIR states the HI for those COCs at 10 feet bgs and deeper is 0.84, DTSC's LeadSpread 7.0 Model indicates the exposure to lead at 10 feet bgs and deeper is less than the threshold of 10 micrograms per deciliter of blood for children and adults, and the summation of risk for those carcinogens detected at 10 feet bgs and deeper is 7.32×10^{-6}.

The City of Long Beach understands that there are different methodologies that may be used to assess risk for various exposures, including those methodologies outlined in the Preliminary Endangerment Assessment (PEA) Guidance Manual and Risk Assessment Guidance for Superfund (RAGS) sites.

The PEA provides basic information for determining whether there has been a release of a hazardous substance that presents a risk to human health or the environment, and specific objectives of the PEA include estimating the potential threat to public health and/or the environment posed by the site and providing an indicator of relative risk among sites. RAGS assessments determine how threatening a hazardous waste site is to human health and the environment. Risk Assessors seek to determine a safe level for each potentially dangerous contaminant present. For humans, this is a level at which ill health effects are unlikely and the probability of cancer is very small. The equations presented within the PEA manual for use in estimating risk and hazard were derived from USEPA equations presented in the RAGS guidance document. The equations are the risk and hazard equations, which have been simplified by incorporating the default values to achieve a reasonable maximum estimation of exposure in a residential setting.

A new site investigation is not warranted, as the site has been adequately characterized. A new Draft HRA is not warranted, as the Draft HRA prepared in August 2003 used data collected expressly for

the risk assessment following stringent EPA protocols specified in the EPA-reviewed and approved Sampling and Analysis Plan. The Draft HRA is currently undergoing review by OEHHA.

A-7-11
Please see Responses to Comments A-7-9 and A-7-10. The City is complying with the appropriate regulatory review and approval processes.

A-7-12
Please see Responses to Comments A-7-9 and A-7-10 and Draft EIR Section 4.13, which document that potential human health risks associated with soil are below established thresholds and that remediation and/or institutional controls are not warranted. Section 4.13, pages 4.13-13–4.13-15 of the Draft EIR provide the results of the groundwater sampling conducted on site in 2000. Section 4.13, page 4.13-15, states that groundwater underlying the site has not been impacted by residual concentrations of chemicals detected in soils from 5–90 feet bgs. The soil data do not indicate a vertical migration of the constituents detected in on-site soils. The summary in the Draft HRA regarding the groundwater investigation conducted by ESE provides the rationale for closing the wells (i.e., the constituents detected in the on-site soils were either not detected in groundwater or were below regulatory agency threshold values). The area proposed for the Sports Park will be rezoned to “Park” (P) and committed to recreation uses. Therefore, remediation and/or other institutional controls are not warranted.